#### REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

| 1204, Altington, VA 22202-4302, and to the Office of M  | anagement and Budget, Paperwork Red | fuction Project (0704-0188), V | Vashington, DC 20503.                             |
|---|-------------------------------------|--------------------------------|---|
| AGENCY USE ONLY (Leave blank)   | 2. REPORT DATE                      | 3. REPORT T                    | YPE AND DATES COVERED                             |
|   | August 16, 2002                     | FINAL TECHNI                   | ICAL REPORT                                       |
| TITLE AND SUBTITLE     Sailor Relationship Management: The Use     Morale and Retention   | e of Customer Relationship Ma       | anagement in Sailor            | 5. FUNDING NUMBERS<br>ONR Grant #N00014-01-1-0917 |
| 6. AUTHORS<br>Dr. Mark L. Gillenson   |                                     |                                |   |
| 7. PERFORMING ORGANIZATION NAM<br>Department of Management Information S<br>300 Fogelman College of Business and Ed<br>The University of Memphis<br>Memphis, TN 38152 | Systems<br>conomics                 |                                | 8. PERFORMING ORGANIZATION<br>REPORT NUMBER       |
| 9. SPONSORING/MONITORING AGENC<br>Office of Naval Research (ONR)<br>800 N. Quincy Street<br>Arlington, VA 22217-5660  | Y NAME(S) AND ADDRESS(              | ES)                            | 10. SPONSORING/MONITORING AGENCY<br>REPORT NUMBER |
| 11. SUPPLEMENTARY NOTES   |                                     |                                |   |
|   |                                     |                                |   |
| 12a. DISTRIBUTION/AVAILABILITY STAT Unlimited Distribution  | EMENT                               |                                | 12b. DISTRIBUTION CODE                            |
|   |                                     |                                |   |
| 13. ABSTRACT (Maximum 200 words)  An approach to improving sailor sailors utilizing advances in information to  | morale and retention is for the     | Navy to develop a mo           | ore personal relationship with each of its        |

An approach to improving sailor morale and retention is for the Navy to develop a more personal relationship with each of its sailors, utilizing advances in information technology. Customer Relationship Management (CRM) is a concept that has personalized the marketing process over the Internet. An even newer concept, Employee Relationship Management (ERM), seeks to turn the lessons learned from CRM inwards to a company's own employees, not to sell them something but to develop a closer, more personalized relationship with them. This talk will describe a study that explored the idea of ERM within the Navy, resulting in Sailor Relationship Management (SRM.) The work included focus group interviews that led to the development of a survey instrument that was then used to determine what kinds of personalized information would be most attractive to sailors deployed at sea.

## 20020827 027

| 14. SUBJECT TERMS Sailor relationship management, el management, personalization. | employee relationship management, o                   | customer relationship                   | 15. NUMBER OF PAGES<br>40  |
|---|---|---|----------------------------|
| 17 SECURITY CLASSIFICATION  |   | T                                       | 16. PRICE CODE             |
| 17. SECURITY CLASSIFICATION OF REPORT Unclassified                                | 18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified | 19. SECURITY CLASSIFICATION OF ABSTRACT | 20. LIMITATION OF ABSTRACT |

NSN 7540-01-280-5500

Computer Generated

STANDARD FORM 298 (Rev 2-89) Prescribed by ANSI Std 239-18

#### FINAL TECHNICAL REPORT

GRANT #: N00014-01-1-0917

PRINCIPAL INVESTIGATOR: Dr. Mark L. Gillenson (email: mgillnsn@memphis.edu)

**INSTITUTION:** The University of Memphis

<u>GRANT TITLE:</u> Sailor Relationship Management: The Use of Customer Relationship Management in Sailor Morale and Retention

AWARD PERIOD: 1 June 2001 - 31 May 2002

OBJECTIVE: The objective is to determine the means by which personalization of the Navy's relationship with its sailors through the use of information technology can improve sailor morale and retention. The primary focus and objective is how Customer Relationship Management (CRM) concepts and techniques can be adapted to the milieu of employee morale and retention in general, and in the Navy, specifically. The ultimate product will be a detailed blueprint of how the Navy can personalize its relationship with its sailors through information technology, which will lead to improved sailor morale and retention.

<u>APPROACH</u>: The work approach began with determining the opportunities that the Navy has to offer, such as job postings, training, and educational opportunities. It proceeded with a study of the kinds of data that the Navy stores about its sailors. Next was a series of focus group and personal interviews to further establish the range of personalization categories that would appeal to sailors. This led to the development of a survey instrument that would establish the interest that sailors had in the various personalization categories. Finally, the survey was conducted and the results analyzed.

#### ACCOMPLISHMENTS: (throughout award period):

Background: As with any human organization, the U.S. Navy is only as effective as its personnel make it. Traditionally, the Navy's sailors have been a dedicated group, motivated by the concept of serving their country as well as by the desire to have a rewarding career. Nevertheless, it is clearly to the Navy's advantage to continually try to enhance the sailors' comfort level in and commitment to the Navy in any reasonable way that it can. One issue is morale. In any organizational endeavor, the happier the employees are with their work and employer, the more effective they will be as employees. Another issue is sailor retention. As the complexity and technical nature of military equipment of all descriptions increases, the return on the investment of recruiting and training qualified sailors becomes ever more critical. This translates directly into the issue of sailor retention. For the Navy to spend large amounts of time and money to recruit and train sailors for increasingly technical jobs, only to see them leave the military after a few years, is clearly counter-productive and is a very serious issue for military

readiness. Adding to the problem is the sharply increasing level of technology in society and industry, in general. This has led to a shortage of qualified workers in the civilian sector, driving up salary levels there and making it all the more attractive for military personnel to leave the military for the civilian sector.

It is thus to the Navy's advantage to build a relationship with its sailors that fosters improved morale, maximizes job satisfaction, and advances the goal of sailor retention. One avenue of approach to this problem is to create an environment in which each sailor feels that the Navy knows about him/her personally and cares about him/her personally. It is well known that people like to be treated as individuals and are more receptive to institutions that are capable of doing so. Developing a highly personalized relationship between the Navy and each of its sailors will improve sailor morale, job satisfaction, and retention. But how can an organization as big as the U.S. Navy possibly relate to each of its sailors on an individual basis? The answer to this question lies in the capabilities of modern information systems and in an emerging body of techniques developed in the field of marketing, known variously as Customer Relationship Management (CRM), one-to-one marketing, or personalized marketing.

CRM refers to a retailer offering a customer specific products for their consideration based on what the retailer already knows about the customer. There are several fundamental elements of CRM. First, the retailer and the customer must be able to communicate with each other on an individual or one-to-one basis. It doesn't necessarily have to be literally face-to-face, but it does have to be an isolated interaction between the one retailer and the one customer. Second, the retailer must be able to learn about the customer and have the capability to store what he has learned for future use. This data comes in three forms: demographics, preferences, and "sales history." Third, the retailer must be able to effectively use what he has learned about the customer in future marketing attempts.

The essence of this project is to turn the body of knowledge that has been built about CRM inward and apply it to an organization's own employees, specifically to the Navy's sailors. There is a great deal of commonality between personalization in marketing and in employee relations. Both include reaching out and establishing relationships with individual people, developing loyalty, and retaining interest in the organization. How is the Navy to do this with its sailors? In both cases the organizations can collect demographic and preference data about their customers, in the marketing case, or their employees in the employee relations case. In marketing there is sales history. In employee relations there is job assignment history, skills inventory, training completed, and so on. Putting all of this together for the Navy, the basic premise, as one might present it to a sailor, is this:

"You are on a ship in the middle of the ocean and you sign on to a personalized Navy Internet web site or 'portal' via satellite. You identify yourself to the portal and immediately are presented with a variety of information that is tailored to your personal needs and interests." The question is, what kinds of personalized information would sailors like to see that generally speaking would make them happy?

Several Navy Web sites already exist that either provide general information to sailors and, in some cases, to their families, or go beyond that and allow the sailors to access personal data about themselves. These include Bupers Access (BA), Bupers Online (BOL), Job Assignment and Selection System (JASS), Lifelines, and Staynavy. But none of them include the kind of automated personalization being proposed here.

<u>Focus Group Interviews</u>: Through observations of commercial Internet portals and discussions with a wide variety of naval personnel at the Naval Personnel Command in Millington, TN, we established a short list of the major types of personalization that would be interesting and useful to sailors. This list was enhanced by a focus group interview on this subject held on July 26, 2001 with a group of six Navy Counselors at their annual meeting at the Adams Mark Hotel in Memphis.

This list was further refined and expanded based on six focus group interviews conducted with sailors aboard the guided-missile frigate USS Stephen W. Groves (FFG-29) at the Pascagoula, MS Naval Station on October 4-5, 2001. One group consisted of officers, two groups consisted of chiefs, and three groups consisted of sailor in grades E-1 through E-6.

The result was the following list of six major categories of personalized interchange between the Navy and its sailors:

- 1. General Interest Information.
- 2. Family Communications.
- 3. Career and Training Information.
- 4. Military News.
- 5. Shipmate News.
- 6. Job-Related Information.

The Survey Instrument: Further refinement and discussions with personnel at the Naval Personnel Command in Millington, TN resulted in the survey instrument shown in Appendix 1. The six major categories were expanded to include a Health and Fitness Information category and each of the now seven categories were fleshed-out with multiple sub-categories. We believe that the seven lists of category/subcategories, gleaned from the focus groups and the other background work, are important in and of themselves, even without the survey results.

The Survey: The survey was conducted on May 13-15, 2002, on board the USS Constellation (CV 64) and the USS Peleliu (LHA 5), both docked at the San Diego Naval Base. The subjects were a convenience sample of 450 sailors, chosen with the sole stipulation that each had already served at sea. The demographics of the subjects are shown in Appendix 2. Most were young (55% age 20-24), of lower grades (74% grade E2-E4), single (64%), and had no children under the age of 21 (70%.)

The subjects were asked to rank order the importance to them of the seven major categories, where 1 was the most important and 7 was the least important. The results, shown in Appendix 3, include the following major category means, in order:

- 1.76 Family Communications
- 3.17 General Interest Information
- 3.25 Career and Training Information
- 3.95 Job-Related Information
- 4.58 Health and Fitness Information
- 5.12 Military News
- 6.16Shipmate News

The major categories ranked first, in order, were:

- 66.5% Family Communications
- 12.0% Career and Training Information
- 11.0% General Interest Information
- 5.6% Job-Related Information
- 2.3% Health and Fitness Information
- 2.0% Military News
- 0.5% Shipmate News

Because of the heavy skew towards family communications, it was interesting to see which categories were ranked second, most often:

- 33.2% General Interest Information
- 24.6% Career and Training Information
- 14.1% Job-Related Information
- 13.3% Family Communications
- 7.9% Health and Fitness Information
- 5.1% Military News
- 1.8% Shipmate News

The survey instrument, Appendix 1, shows all of the subcategories. For all of the categories, except Family Communications, we asked the subjects to check the five subcategories of greatest interest. (Family Communications had a small number of choices so we asked for the top three subcategories.) The results are shown in Appendix 4. The major results for the four most significant categories, showing the percentage of subcategories checked within each category, were:

#### Family Communications

- 96.1% Family emails.
- 87.8% Family photos.

#### General Interest Information

- 66.2% Liberty Port Information (For Upcoming Visits)
- 61.2% Music Releases
- 51.6% News (World Headlines)
- 51.4% Movie Releases

#### Career and Training Information

- 92.0% Advancement Results Notification (for you)
- 78.7% College Courses to Be Offered (PACE Announcements)
- 66.0% Incentive/Bonus/Special Pay/Allowances Info, Offers
- 61.6% Personnel/Pay Record: Reminder to Update

#### Job-Related Information

80.4% Technical Questions: Answers to Technical Questions <u>You Have Posted</u> on the Internet Given by Sailors of Your Rate on Other Ships

79.8% Technical Questions: Technical Questions Posted on the Internet by Sailors on Other Ships Seeking Help from You and Others of Your Rate

75.7% Sailor Best Practices: "How to Get Things Done", Peer-to-Peer Heads Up, (regarding new regulations involving you, etc.)

<u>CONCLUSIONS</u>: The main conclusion is the establishment of the personalization categories and subcategories, plus the survey results showing the relative sailor interest in them, as discussed above. Further, Appendix 5 demonstrates that a Pearson Chi-Square test revealed that there was a positive but marginal effect of marital status on the choice of Family Communication as the most important category. Appendix 6 shows that there was no effect of grade, age, or duty on the nine career subcategories. Appendix 7 shows that there was no effect of grade, age, or duty on the eight job-related subcategories.

Two notes should be made regarding using these results and conclusions in the implementation of a Navy portal. One is that in any such implementation, it would be unwise to attempt to provide all of these personalization categories and subcategories in the first implementation phase. Thus, the survey results are very valuable in providing guidelines for which categories and subcategories to implement first to produce the greatest impact at the earliest opportunity.

The second is that careful consideration should be given to outsourcing as much of this personalization as possible. Two immediately obvious possibilities are to outsource the General Interest Information category to a company with a "my yahoo" type of facility. The other is to outsource the Shipmate News category to a "Classmates.com" type of company.

<u>SIGNIFICANCE</u>: The significance of this study is that we have established a set of personalization categories and subcategories, plus the relative interest in them that sailors have, which can be used as the basis for the personalization of a Navy Internet portal. Ultimately, the significance is that this should improve sailor morale and retention.

PATENT INFORMATION: none

AWARD INFORMATION: none

REFEREED PUBLICATIONS (for total award period):

A paper will be submitted to a refereed journal by the end of this calendar year.

## **Appendix 1: Survey Instrument**

#### SURVEY ON PERSONALIZING AN INTERNET SESSION WHILE AT SEA

Office of Naval Research Contract #N00014-01-1-0917

This is a study that will be evaluating the most important types of information that the Navy can "push" or provide for you upon signing on to the Internet while at sea. Here is the idea:

"You are on a ship in the middle of the ocean and you sign on to a personalized Navy Internet web site or 'portal' via satellite. You identify yourself to the portal and immediately are presented with a variety of information that is tailored to your personal needs and interests." The present study seeks to understand the kinds of personalized information that you would like to see and that generally speaking would make you happy.

Please do not consider the degree of Internet access that you have experienced at sea up to this point. This is forward-looking research that assumes that Internet access at sea will steadily improve over time.

Personalized information means information that is specific to you, to a group that you fall into, or to your interests. The personalization is based on data that the Navy normally maintains about you (pay grade, occupational specialty, i.e. enlisted rating or officer community, length of service, etc.) and on interest data that you may voluntarily provide (type of military news you are interested in, favorite sports teams, whether or not you are interested in news about past shipmates, etc.)

This study <u>only</u> concerns information that you wish to be automatically "pushed" or brought to you at the beginning of each Internet session, based on who you are and on the interest data that you have previously given. It <u>does not</u> involve "surfing the Web" or seeking information while you are logged on.

This short survey should only take 10-15 minutes to fill-out. Thank you.

Mark L. Gillenson, Ph.D. Professor of Management Information Systems Fogelman College of Business and Economics The University of Memphis Memphis, TN 38152

#### PRIVACY ACT STATEMENT

Public Law 93-579, (called the Privacy Act of 1974) requires that you be informed of the purposes of this survey and of the uses to be made of the information collected. The authority to collect this information is granted under Title 10, United States Code, sections 136 and 2358. Please read the following details regarding the study and ask any questions you may have before continuing on to the survey.

PURPOSE: The purpose of this survey is to determine the types of data that Sailors would like to see when they sign on to a Navy Internet portal and identify themselves. This study is being sponsored by the Office of Naval Research under research grant #N00014-01-1-0917.

ROUTINE USES: The information provided in this survey will be analyzed by the principal investigator, Dr. Mark L. Gillenson at The University of Memphis. The data will support the development of plans to create future Navy Internet portals for Sailors.

CONFIDENTIALITY: All responses are anonymous and will be held in confidence by the principal investigator, Dr. Mark L. Gillenson. Information you provide will be considered only when statistically combined with the responses of others and will <u>NOT</u> be identified with any single individual. The information provided will <u>NOT</u> become part of the military record of any service member and will <u>NOT</u> affect your career in any way.

PARTICIPATION: Completion of this questionnaire is entirely voluntary. Failure to respond to any of the questions will  $\underline{NOT}$  result in any penalties except for lack of representation of  $\underline{your}$   $\underline{views}$  in the final results.

#### **About You**

Instructions: Please answer the following questions about your background. Do NOT write your name or social security number on any of these forms.

| w mat is                       | s your cum   | rent pay grade? (Circle your response)                    |
|--------------------------------|--|---|
| E-1                            | W-2  | O-1   |
| E-2                            | W-3  | O-2   |
| E-3                            | W-4  | O-3   |
| E-4                            |  | O-4   |
| E-5                            | O-1E   | O-5   |
| E-6                            | O-2E   | O-6   |
| E-7                            | O-3E   | O-7 or above  |
| E-8                            |  |   |
| E-9                            |  |   |
| What is                        | your curr  | rent age?   |
| How ma                         | any years  | have you been on active duty in the Navy?                 |
| What is<br>Male<br>Female      | your gend  | der? (Circle your response)                               |
| Single (<br>Married<br>Remarri | never mar<br>(for the filed (was d<br>Separated<br>d |   |
| Do you<br>Yes<br>No            | currently l  | have children under the age of 21? (Circle your response) |
| Are You<br>Yes<br>No           | a Supervi  | isor? (Circle your response)                              |
|                                |  |   |

#### **Major Categories**

We have identified seven major categories of personalized information.

**Instructions:** Please rank order the seven major categories based on your interest in them. Mark the category that you feel would interest you the most in terms of personalized information with a "1", the second most important with a "2", and so on to "7" (being the least important)."

| <br>Career and Training Information (information about bonuses, your upcoming rotation, training opportunities, etc.)             |
|---|
| <br>Family Communications (emails, photos, video clips, etc. from your family)  |
| <br><b>General Interest Information</b> (world news, hometown news, scores of favorite sports teams, selected stock quotes, etc.) |
| <br>Health and Fitness Information (reminders of physical exams, fitness tests, etc.)   |
| <br><b>Job-Related Information</b> (answers to your job-related technical questions, status of parts you have on order, etc.)     |
| <br>Military News (news about the Navy and other services in categories that you select.)   |
| <br>Shipmate News (news about current and past shipmates)   |

#### Category I. General Interest Information

Instructions: Please check up to five (5) general interest categories that would interest you the most. (Do not rank order.) \_\_\_ Horoscopes \_\_\_ Liberty Port Information (For Upcoming Visits) \_\_\_ Lottery Results Movie Releases \_\_\_ Music Releases \_\_\_ News (U.S. Headlines) \_\_\_ News (World Headlines) \_\_\_ News (Your Hometown) News (Your Homeport City) \_\_\_ Sports (General Headlines) Sports (Major Contest Results) Sports (Your Favorite Teams' Results) Stock Market (Market Averages and News) Stock Market (Quotes of Particular Stocks/Mutual Funds) Weather (General U.S.) Weather (Your Hometown) \_\_\_ Weather (Your Homeport City)

#### Category II. Family Communications

| <b>Instructions:</b> Please check up to three (3) family communications categories that would interest you the most. (Do not rank order.) |
|---|
| Family Emails   |
| Family Photos   |
| Family Video Clips  |
| Reminders: Anniversary  |
| Reminders: Birthday   |
| Reminders: Upcoming Leave   |
|   |
|   |
| Category III. Shipmate News   |
| <b>Instructions:</b> Please <u>check up to five (5)</u> shipmate news categories that would interest you the most. (Do not rank order.)   |
| Current Shipmates: Awards   |
| Current Shipmates: Family News  |
| Current Shipmates: New Assignments  |
| Current Shipmates: Promotions   |
| Current Shipmates: Retirements  |
| Past Shipmates: Awards  |
| Past Shipmates: Family News   |
| Past Shipmates: New Assignments   |
| Past Shipmates: Promotions  |
| Past Shipmates: Retirements   |
| Past Shipmates: Reunion Announcements/News  |

#### Category IV. Career and Training Information

| <b>Instructions:</b> Please <u>check up to five (5)</u> career and training information categories th interest you the most. (Do not rank order.)  | at would   |
|--|------------|
| Advancement Results Notification (for you)   |            |
| Announcements about Your Enlisted Rating or Officer Community  |            |
| Announcements of Openings in Enlisted Ratings (for undesignated personnel, personnel in overmanned rates who are needed in a related rate, for personnel indicate they want to change rates)   | for<br>who |
| College Courses To Be Offered (PACE Announcements)   |            |
| Incentive/Bonus/Special Pay/Allowances Information, Offers   |            |
| Personnel/Pay Record: Reminder to Update   |            |
| Qualifications: Reminder of Qualifications/Recertifications  |            |
| Rotation: Reminder of Dates for Your Upcoming Rotation   |            |
|  |            |
| Training Courses Appropriate for Your Professional Development (Notice of)   |            |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that   | would      |
|  | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder  Dental Exam: Reminder of Your Annual Dental Exam   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder  Dental Exam: Reminder of Your Annual Dental Exam  Fitness Class Schedule   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder  Dental Exam: Reminder of Your Annual Dental Exam  Fitness Class Schedule  Fitness Test: Reminder of Your Upcoming Fitness Test   | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder  Dental Exam: Reminder of Your Annual Dental Exam  Fitness Class Schedule  Fitness Test: Reminder of Your Upcoming Fitness Test  Health/Fitness News                      | would      |
| Category V. Health and Fitness Information  Instructions: Please check up to five (5) health and fitness information categories that interest you the most. (Do not rank order.)  Dental Appointment: Reminder  Dental Exam: Reminder of Your Annual Dental Exam  Fitness Class Schedule  Fitness Test: Reminder of Your Upcoming Fitness Test  Health/Fitness News  Health/Fitness Tips | would      |

| <b>Instructions:</b> Please check up to five (5) job-related information categories that would interest you the most. (Do not rank order.)             |
|--|
| Conferences: Notification of by Rate   |
| Evaluation Input: Reminder of Due Date   |
| Sailor Best Practices: "How to Get Things Done", Peer-to Peer Heads Up, (regarding new regulations involving you, etc.)                                |
| Parts-on-Order: Status of Parts You Have on Order  |
| Reunions: Notification of Reunions by Rate   |
| Subordinates: Reminder of Their Appointments, Due Dates, etc.  |
| Technical Questions: Answers to Technical Questions <u>You Have Posted</u> on the Internet, Given by Sailors of Your Rate on Other Ships               |
| Technical Questions: Technical Questions <u>Posted on the Internet by Sailors on Other Ships</u> Seeking Help from You and Others of Your Rate         |
| Category VII. Military News  Instructions: Please check up to five (5) military news categories that would interest you the most. (Do not rank order.) |
| About Your Home Port   |
| About Your Enlisted Rating or Officer Community  |
| About Your Ship  |
| About Your Battle Group  |
|  |
| BUPERS/NPC News Stories  |
| BUPERS/NPC News Stories EARLY BIRD (DOD)   |
|  |
| EARLY BIRD (DOD)   |
| EARLY BIRD (DOD)  LINK (Enlisted Professional Bulletin)  |

Category VI. Job-Related Information

| ould like to have de | J | Journal of the original origi | on to the Int | ernet wille at | sea. |
|----------------------|---|--|---------------|----------------|------|
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               | •              |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |
|                      |   |  |               |                |      |

**Thank You For Completing This Survey** 

## Appendix 2: Survey Demographics Frequencies

**Completed Survey Statistics** 

|   |         | GRADE | AGE | DUTY | GENDER | MARRIED | CHILDREN | SUP |
|---|---------|-------|-----|------|--------|---------|----------|-----|
| N | Valid   | 438   | 448 | 448  | 449    | 445     | 446      | 448 |
|   | Missing | 12    | 2   | 2    | 1      | 5       | 4        | 2   |

## **Survey\*Demographics Frequency Tables**

GRADE

| GRADE   |        |           |         |                  |                       |  |  |  |
|---------|--------|-----------|---------|------------------|-----------------------|--|--|--|
|         |        | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |  |  |  |
|         | e1     | 19        | 4.2     | 4.3              | 4.3                   |  |  |  |
|         | e2     | 49        | 10.9    | 11.2             | 15.5                  |  |  |  |
|         | e3     | 125       | 27.8    | 28.5             | 44.1                  |  |  |  |
|         | e4     | 157       | 34.9    | 35.8             | 79.9                  |  |  |  |
| Valid   | e5     | 47        | 10.4    | 10.7             | 90.6                  |  |  |  |
|         | e6     | 38        | 8.4     | 8.7              | 99.3                  |  |  |  |
|         | e7     | 2         | 0.4     | 0.5              | 99.8                  |  |  |  |
|         | 03     | 1         | 0.2     | 0.2              | 100                   |  |  |  |
|         | Total  | 438       | 97.3    | 100.0            |                       |  |  |  |
| Missing | System | 12        | 2.7     |                  |                       |  |  |  |
| Total   |        | 450       | 100     |                  |                       |  |  |  |

AGE

| AGE     |        |           |         |                  |                       |  |  |  |
|---------|--------|-----------|---------|------------------|-----------------------|--|--|--|
|         |        | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |  |  |  |
|         | 17-19  | 64        | 14.2    | 14.3             | 14.3                  |  |  |  |
| ĺ       | 20-24  | 247       | 54.9    | 55.1             | 69.4                  |  |  |  |
|         | 25-29  | 65        | 14.4    | 14.5             | 83.9                  |  |  |  |
| Valid   | 30-34  | 38        | 8.4     | 8.5              | 92.4                  |  |  |  |
| V and   | 35-39  | 24        | 5.3     | 5.4              | 97.8                  |  |  |  |
|         | 40-44  | 7         | 1.6     | 1.6              | 99.3                  |  |  |  |
|         | 45-49  | 3         | 0.7     | 0.7              | 100                   |  |  |  |
|         | Total  | 448       | 99.6    | 100              |                       |  |  |  |
| Missing | System | 2         | 0.4     |                  |                       |  |  |  |
| Total   |        | 450       | 100     |                  |                       |  |  |  |

DUTY

| Dell    |        |           |         |                  |                       |  |  |  |
|---------|--------|-----------|---------|------------------|-----------------------|--|--|--|
|         | _      | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |  |  |  |
|         | 0-3    | 303       | 67.3    | 67.6             | 67.6                  |  |  |  |
|         | 4-6    | 75        | 16.7    | 16.7             | 84.4                  |  |  |  |
|         | 7-9    | 17        | 3.8     | 3.8              | 88.2                  |  |  |  |
| Valid   | 10-12  | 17        | 3.8     | 3.8              | 92.0                  |  |  |  |
| v and   | 13-15  | 16        | 3.6     | 3.6              | 95.5                  |  |  |  |
|         | 16-18  | 18        | 4.0     | 4.0              | 99.6                  |  |  |  |
|         | 19-21  | 2         | 0.4     | 0.4              | 100                   |  |  |  |
|         | Total  | 448       | 99.6    | 100              |                       |  |  |  |
| Missing | System | 2         | 0.4     |                  |                       |  |  |  |
| Total   |        | 450       | 100     |                  |                       |  |  |  |

GENDER

|         |        | - OL      | NDEK    |                  |                       |
|---------|--------|-----------|---------|------------------|-----------------------|
|         |        | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |
|         | Female | 13        | 2.9     | 2.9              | 2.9                   |
| Valid   | Male   | 436       | 96.9    | 97.1             | 100                   |
|         | Total  | 449       | 99.8    | 100              |                       |
| Missing | System | 1         | 0.2     |                  |                       |
| Total   |        | 450       | 100     |                  |                       |

MARRIED

|         |                | 17474     | MILD    |                  |                       |
|---------|----------------|-----------|---------|------------------|-----------------------|
|         |                | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |
| Valid   | Not<br>Married | 285       | 63.3    | 64               | 64                    |
| v anu   | Married        | 160       | 35.6    | 36               | 100                   |
|         | Total          | 445       | 98.9    | 100              |                       |
| Missing | System         | 5         | 1.1     |                  |                       |
| Total   |                | 450       | 100     |                  |                       |

**CHILDREN** 

|         |        | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |
|---------|--------|-----------|---------|------------------|-----------------------|
|         | No     | 316       | 70.2    | 70.9             | 70.9                  |
| Valid   | Yes    | 130       | 28.9    | 29.1             | 100                   |
|         | Total  | 446       | 99.1    | 100              |                       |
| Missing | System | 4         | 0.9     |                  |                       |
| Total   |        | 450       | 100     |                  |                       |

SUPERVISOR

|         | -,     | Frequency | Percent | Valid<br>Percent | Cumulative<br>Percent |
|---------|--------|-----------|---------|------------------|-----------------------|
|         | No     | 296       | 65.8    | 66.1             | 66.1                  |
| Valid   | Yes    | 152       | 33.8    | 33.9             | 100                   |
|         | Total  | 448       | 99.6    | 100              |                       |
| Missing | System | 2         | 0.4     |                  |                       |
| Total   |        | 450       | 100     |                  |                       |

## **Appendix 3: Survey Category Importance and Counts**

### **Grand Survey Category Importance**

(1=most important, N= 89.1% or 391 of 450 usable surveys)

|             | CAT1                    | CAT2          | CAT3  | CAT4   | CAT5  | CAT6  | CAT7  |
|-------------|-------------------------|---------------|---|--|---|---|---|
|             | Career                  | Family        | General   | Health   | Job   | Navy  | Mates   |
|             | 3.25                    | 1.76          | 3.17  | 4.58   | 3.95  | 5.12  | 6.16  |
| Lower Bound |                         |               |   |  |   |   |   |
| Zower Bound | 3.09                    | 1.63          | 3.02  | 4.42   | 3.8   | 4.97  | 6.04  |
| Upper Bound | 3.41                    | 1.89          | 3.33  | 4.74   | 4.1   |   | 6.29  |
|             | 3.18                    | 1.58          | 3.1   |  |   |   | 6.32  |
|             | 3                       | I             | 3   |  |   |   | 7   |
|             | 1.57                    | 1.33          | 1.6   |  |   |   | 1.28  |
|             | Lower Bound Upper Bound | Career   3.25 | Career         Family           3.25         1.76           Lower Bound         3.09         1.63           Upper Bound         3.41         1.89           3.18         1.58           3         1 | Career         Family         General           3.25         1.76         3.17           Lower Bound         3.09         1.63         3.02           Upper Bound         3.41         1.89         3.33           3.18         1.58         3.1           3         1         3 | Career         Family         General         Health           3.25         1.76         3.17         4.58           Lower Bound         3.09         1.63         3.02         4.42           Upper Bound         3.41         1.89         3.33         4.74           3.18         1.58         3.1         4.62           3         1         3         5 | Career         Family         General         Health         Job           3.25         1.76         3.17         4.58         3.95           Lower Bound         3.09         1.63         3.02         4.42         3.8           Upper Bound         3.41         1.89         3.33         4.74         4.1           3.18         1.58         3.1         4.62         3.96           3         1         3         5         4 | CAT1 Career         CAT2 Family         CAT3 General         CAT4 Health         CAT5 Job Navy           3.25         1.76         3.17         4.58         3.95         5.12           Lower Bound         3.09         1.63         3.02         4.42         3.8         4.97           Upper Bound         3.41         1.89         3.33         4.74         4.1         5.27           3.18         1.58         3.1         4.62         3.96         5.21           3         1         3         5         4         6 |

Grand Survey Category Counts
(1=most important, N= 89.1% or 391 of 450 usable surveys) CAT \* RANK Crosstabulation

|     |         |                     |        |        |        | RANK   |        |        |        |
|-----|---------|---------------------|--------|--------|--------|--------|--------|--------|--------|
|     |         |                     | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
|     |         | Count               | 47     | 96     | 96     | 70     | 44     | 22     | 16     |
|     | Career  | %<br>within<br>RANK | 12.00% | 24.60% | 24.60% | 17.90% | 11.30% | 5.60%  | 4.10%  |
|     |         | Count               | 260    | 52     | 32     | 21     | 15     | 8      | 3      |
|     | Family  | %<br>within<br>RANK | 66.50% | 13.30% | 8.20%  | 5.40%  | 3.80%  | 2.00%  | 0.80%  |
|     |         | Count               | 43     | 130    | 75     | 58     | 43     | 28     |        |
|     | General | %<br>within<br>RANK | 11.00% | 33.20% | 19.20% | 14.80% |        |        | 14     |
|     |         | Count               | 9      | 31     | 64     | 88     | 11.00% | 7.20%  | 3.60%  |
| CAT | Health  | %<br>within<br>RANK | 2.30%  | 7.90%  | 16.40% | 22.50% | 20.50% | 14.30% | 16.10% |
|     |         | Count               | 22     | 55     | 78     | 80     | 93     | 48     | 15     |
|     | Job     | %<br>within<br>RANK | 5.60%  | 14.10% | 19.90% | 20.50% | 23.80% | 12.30% | 3.80%  |
|     |         | Count               | 8      | 20     | 33     | 46     | 84     | 149    | 51     |
|     | Navy    | %<br>within<br>RANK | 2.00%  | 5.10%  | 8.40%  | 11.80% | 21.50% | 38.10% | 13.00% |
|     |         | Count               | 2      | 7      | 13     | 28     | 32     | 80     | 229    |
|     | Mates   | %<br>within<br>RANK | 0.50%  | 1.80%  | 3.30%  | 7.20%  | 8.20%  | 20.50% | 58.60% |

## **Appendix 4: Detail Question Counts**

#### Detail Categorical Valid Response Rate

| Descriptive            | Statistics | Category<br>N | Selections | 0%     |
|------------------------|------------|---------------|------------|--------|
|                        | Q101       | 420           | 103        | 24.52% |
|                        | Q102       | 420           | 278        | 66.19% |
|                        | Q103       | 420           | 21         | 5.00%  |
|                        | Q104       | 420           | 216        | 51.43% |
|                        | Q105       | 420           | 257        | 61.19% |
|                        | Q106       | 420           | 165        | 39.29% |
|                        | Q107       | 420           | 217        | 51.67% |
| Cataman                | Q108       | 420           | 151        | 35.95% |
| Category 1:<br>General | Q109       | 420           | 66         | 15.71% |
|                        | Q110       | 420           | 173        | 41.19% |
|                        | Q111       | 420           | 83         | 19.76% |
|                        | Q112       | 420           | 154        | 36.67% |
|                        | Q113       | 420           | 66         | 15.71% |
|                        | Q114       | 420           | 73         | 17.38% |
|                        | Q115       | 420           | 69         | 16.43% |
|                        | Q116       | 420           | 41         | 9.76%  |
|                        | Q117       | 420           | 35         | 8.33%  |
|                        | Q201       | 434           | 417        | 96.08% |
|                        | Q202       | 434           | 381        | 87.79% |
| Category 2:            | Q203       | 434           | 272        | 62.67% |
| Family                 | Q204       | 434           | 42         | 9.68%  |
|                        | Q205       | 434           | 108        | 24.88% |
|                        | Q206       | 434           | 101        | 23.27% |
|                        | Q301       | 321           | 234        | 72.90% |
|                        | Q302       | 321           | 206        | 64.17% |
|                        | Q303       | 321           | 228        | 71.03% |
|                        | Q304       | 321           | 262        | 81.62% |
| Category 3:            | Q305       | 321           | 175        | 54.52% |
| Shipmates              | Q306       | 321           | 70         | 21.81% |
|                        | Q307       | 321           | 77         | 23.99% |
|                        | Q308       | 321           | 89         | 27.73% |
|                        | Q309       | 321           | 111        | 34.58% |
|                        | Q310       | 321           | 65         | 20.25% |
|                        | Q311       | 321           | 102        | 31.78% |
|                        | Q401       | 385           | 354        | 91.95% |
|                        | Q402       | 385           | 153        | 39.74% |
|                        | Q403       | 385           | 157        | 40.78% |
| Category 4:            | Q404       | 385           | 303        | 78.70% |
| Category 4:            | Q405       | 385           | 254        | 65.97% |
|                        | Q406       | 385           | 237        | 61.56% |
|                        | Q407       | 385           | 132        | 34.29% |
|                        | Q408       | 385           | 143        | 37.14% |
|                        | Q409       | 385           | 212        | 55.06% |

| 1                       | Q501 | 240 | 200 | 1 65 5001 |
|-------------------------|------|-----|-----|-----------|
|                         |      | 348 | 228 | 65.52%    |
|                         | Q502 | 348 | 176 | 50.57%    |
|                         | Q503 | 348 | 144 | 41.38%    |
| Category 5:             | Q504 | 348 | 175 | 50.29%    |
| Health &                | Q505 | 348 | 159 | 45.69%    |
| Fitness                 | Q506 | 348 | 232 | 66.67%    |
|                         | Q507 | 348 | 226 | 64.94%    |
|                         | Q508 | 348 | 185 | 53.16%    |
|                         | Q509 | 348 | 230 | 66.09%    |
|                         | Q601 | 317 | 188 | 59.31%    |
|                         | Q602 | 317 | 215 | 67.82%    |
|                         | Q603 | 317 | 240 | 75.71%    |
| Category 6:             | Q604 | 317 | 174 | 54.89%    |
| Job                     | Q605 | 317 | 109 | 34.38%    |
|                         | Q606 | 317 | 158 | 49.84%    |
|                         | Q607 | 317 | 255 | 80.44%    |
|                         | Q608 | 317 | 253 | 79.81%    |
|                         | Q701 | 348 | 276 | 79.31%    |
|                         | Q702 | 348 | 185 | 53.16%    |
|                         | Q703 | 348 | 247 | 70.98%    |
| Catagory 7              | Q704 | 348 | 217 | 62.36%    |
| Category 7:<br>Military | Q705 | 348 | 164 | 47.13%    |
| News                    | Q706 | 348 | 57  | 16.38%    |
|                         | Q707 | 348 | 176 | 50.57%    |
|                         | Q708 | 348 | 39  | 11.21%    |
|                         | Q709 | 348 | 162 | 46.55%    |
|                         | Q710 | 348 | 237 | 68.10%    |

## **Appendix 5: Demographic Effects on the Importance of Family Communications**

### Family Effect Crosstabs MARRIED \* FAM1ST Crosstabulation

|         |          |                       | A AMITAL | or Clusse | avula | HOH  |      |     |   |       |
|---------|----------|-----------------------|----------|-----------|-------|------|------|-----|---|-------|
|         |          |                       |          | FAM1ST    |       |      |      |     |   |       |
|         | 7        |                       | 1        | 2         | 3     | 4    | 5    | 6   | 7 | Total |
|         |          | Count                 | 155      | 41        | 23    | . 15 | - 11 | 6   | 2 | 253   |
|         | No       | <b>Expected Count</b> | 168.9    | 33.3      | 20    | 13.7 | 9.8  | 5.2 | 2 | 253   |
| MARRIED |          | Std. Residual         | -1.1     | 1.3       | 0.6   | 0.4  | 0.4  | 0.3 | 0 |       |
| MARKIED | Yes      | Count                 | 104      | - 10      | 8     | 6    | 4    | 2   | 1 | 135   |
|         |          | <b>Expected Count</b> | 90.1     | 17.7      | 11    | 7.3  | 5.2  | 2.8 | 1 | 135   |
|         |          | Std. Residual         |          |           | -     |      | -    |     |   |       |
|         | <u> </u> | Stu. Residual         | 1.5      | -1.8      | 0.8   | -0.5 | 0.5  | -1  | 0 |       |
| Total   |          | Count                 | 259      | 51        | 31    | 21   | 15   | 8   | 3 | 388   |
| 10141   |          | <b>Expected Count</b> |          |           |       |      |      |     | 3 | 388   |

Chi-Square Tests

|                                 | Value     | df | Asymp. Sig. (2-sided) |
|---------------------------------|-----------|----|-----------------------|
| Pearson Chi-Square              | 10.704(a) | 6  | 0.098                 |
| Likelihood Ratio                | 11.253    | 6  | 0.081                 |
| Linear-by-Linear<br>Association | 4.41      | 1  | 0.036                 |
| N of Valid Cases                | 388       |    | 0.030                 |

a 3 cells (21.4%) have expected count less than 5. The minimum expected count is 1.04.

AGE \* FAM1ST Crosstabulation

| AGE * FAM1ST Crosstabulation |       |                       |       |      |     |      |     |     |     |       |
|------------------------------|-------|-----------------------|-------|------|-----|------|-----|-----|-----|-------|
|                              |       |                       |       |      | FA. | M1ST |     |     |     | T     |
|                              |       |                       | 1     | 2    | 3   | 4    | 5   | 6   | 7   | Total |
|                              |       | Count                 | 39    | 9    | 5   | 3    | 3   | 0   | 0   | 59    |
|                              | 17-19 | <b>Expected Count</b> | 39.2  | 7.9  | 4.8 | 3.2  | 2.3 | 1.2 | 0.5 | 59    |
|                              |       | Std. Residual         | 0     | 0.4  | 0.1 | -0.1 | 0.5 | -1  | -1  |       |
|                              |       | Count                 | 136   | 30   | 16  | 12   | 10  | 7   | 2   | 213   |
|                              | 20-24 | <b>Expected Count</b> | 141.5 | 28.4 | 18  | 11.5 | 8.2 | 4.4 | 1.6 | 213   |
|                              |       | Std. Residual         | -0.5  | 0.3  | 0.4 | 0.2  | 0.6 | 1.3 | 0.3 |       |
|                              |       | Count                 | 46    | 3    | 5   | 3    | 1   | 0   | 0   | 58    |
|                              | 25-29 | <b>Expected Count</b> | 38.5  | 7.7  | 4.8 | 3.1  | 2.2 | 1.2 | 0.4 | 58    |
|                              |       | Std. Residual         | 1.2   | -1.7 | 0.1 | -0.1 | 0.8 | -1  | -1  |       |
|                              |       | Count                 | 18    | 5    | 3   | 2    | 0   | 1   | 1   | 30    |
| AGE                          | 30-34 | <b>Expected Count</b> | 19.9  | 4    | 2.5 | 1.6  | 1.2 | 0.6 | 0.2 | 30    |
|                              |       | Std. Residual         | -0.4  | 0.5  | 0.3 | 0.3  | 1.1 | 0.5 | 1.6 |       |
|                              |       | Count                 | 15    | 4    | 1   | 1    | 0   | 0   | 0   | 21    |
|                              | 35-39 | <b>Expected Count</b> | 13.9  | 2.8  | 1.7 | 1.1  | 0.8 | 0.4 | 0.2 | 21    |
|                              |       | Std. Residual         | 0.3   | 0.7  | 0.6 | -0.1 | 0.9 | -1  | -0  |       |
|                              |       | Count                 | 4     | 0    | 2   | 0    | 1   | 0   | 0   | 7     |
|                              | 40-44 | Expected Count        | 4.6   | 0.9  | 0.6 | 0.4  | 0.3 | 0.1 | 0.1 | 7     |
|                              |       | Std. Residual         | -0.3  | -1   | 1.9 | -0.6 | 1.4 | -0  | -0  |       |
|                              |       | Count                 | 1     | 1    | 0   | 0    | 0   | 0   | 0   | 2     |
|                              | 45-49 | <b>Expected Count</b> | 1.3   | 0.3  | 0.2 | 0.1  | 0.1 | 0   | 0   | 2     |
|                              |       | Std. Residual         | -0.3  | 1.4  | 0.4 | -0.3 | 0.3 | -0  | -0  | _     |
|                              |       | Count                 | 259   | 52   | 32  | 21   | 15  | 8   | 3   | 390   |
| Total                        |       | <b>Expected Count</b> | 259   | 52   | 32  | 21   | 15  | 8   | 3   | 390   |

Chi-Square Tests

| Chi-Square Tests                |           |     |                       |  |  |  |  |  |
|---------------------------------|-----------|-----|-----------------------|--|--|--|--|--|
|                                 | Value     | df  | Asymp. Sig. (2-sided) |  |  |  |  |  |
| Pearson Chi-Square              | 27.813(a) | 36  | 0.834                 |  |  |  |  |  |
| Likelihood Ratio                | 31.965    | 36  | 0.661                 |  |  |  |  |  |
| Linear-by-Linear<br>Association | 0.271     | . 1 | 0.603                 |  |  |  |  |  |
| N of Valid Cases                | 390       | 1   | 0.003                 |  |  |  |  |  |

a 38 cells (77.6%) have expected count less than 5. The minimum expected count is .02.

**DUTY** \* FAM1ST Crosstabulation

|              |                | DUIT                  | FAMIST        | LIUSSIADU |          | M1ST |     |     |     | Γ     |
|--------------|----------------|-----------------------|---------------|-----------|----------|------|-----|-----|-----|-------|
|              |                |                       | 1 2 3 4 5 6 7 |           |          |      |     |     |     | Total |
|              |                | Count                 | 176           | 35        | 22       | 15   | 11  | 5   | 2   | 266   |
|              | 0-3 years      | <b>Expected Count</b> | 177.3         | 34.8      | 22       | 14.3 | 10  | 5.5 | 2   | 266   |
|              |                | Std. Residual         | -0.1          | 0         | 0        | 0.2  | 0.2 | -0  | 0   | 200   |
|              |                | Count                 | 41            | 9         | 6        | 3    | 3   | 2   | 0   | 64    |
|              | 4-6 years      | <b>Expected Count</b> | 42.7          | 8.4       | 5.3      | 3.4  | 2.5 | 1.3 | 0.5 | 64    |
|              |                | Std. Residual         | -0.3          | 0.2       | 0.3      | -0.2 | 0.3 | 0.6 | -1  |       |
|              |                | Count                 | 13            | 1         | 0        | 1    | 0   | 0   | 0   | 15    |
|              | 7-9 years      | Expected Count        | 10            | 2         | 1.2      | 0.8  | 0.6 | 0.3 | 0.1 | 15    |
|              |                | Std. Residual         | 0.9           | -0.7      | -<br>1.I | 0.2  | 0.8 | -1  | -0  |       |
|              |                | Count                 | 12            | 0         | 2        | 0    | 0   | 0   | 1   | 15    |
| TO E L'OPE 7 | 10-12<br>years | <b>Expected Count</b> | 10            | 2         | 1.2      | 0.8  | 0.6 | 0.3 | 0.1 | 15    |
| DUTY         | years          | Std. Residual         | 0.6           | -1.4      | 0.7      | -0.9 | 0.8 | -1  | 2.6 |       |
|              |                | Count                 | 5             | 4         | 1        | 2    | 0   | 0   | 0   | 12    |
|              | 13-15          | <b>Expected Count</b> | 8             | 1.6       | 1        | 0.6  | 0.5 | 0.2 | 0.1 | 12    |
|              | years          | Std. Residual         | -1.1          | 1.9       | 0        | 1.7  | 0.7 | -1  | -0  |       |
|              |                | Count                 | 11            | 2         | 1        | 0    | 1   | 1   | 0   | 16    |
|              | 16-18<br>years | <b>Expected Count</b> | 10.7          | 2.1       | 1.3      | 0.9  | 0.6 | 0.3 | 0.1 | 16    |
|              | years          | Std. Residual         | 0.1           | -0.1      | 0.3      | -0.9 | 0.5 | 1.2 | -0  |       |
|              |                | Count                 | 2             | 0         | 0        | 0    | 0   | 0   | 0   | 2     |
|              | 19-21<br>years | Expected Count        | 1.3           | 0.3       | 0.2      | 0.1  | 0.1 | 0   | 0   | 2     |
|              | years          | Std. Residual         | 0.6           | -0.5      | 0.4      | -0.3 | 0.3 | -0  | -0  |       |
| Total        |                | Count                 | 260           | 51        | 32       | 21   | 15  | 8   | 3   | 390   |
| Total        |                | <b>Expected Count</b> | 260           | 51        | 32       | 21   | 15  | 8   | 3   | 390   |

Chi-Square Tests

|                                 | Value     | df | Asymp. Sig. (2-sided) |
|---------------------------------|-----------|----|-----------------------|
| Pearson Chi-Square              | 28.570(a) | 36 | 0.806                 |
| Likelihood Ratio                | 30.467    | 36 | 0.729                 |
| Linear-by-Linear<br>Association | 0.06      | 1  | 0.807                 |
| N of Valid Cases                | 390       |    | 0.007                 |

a 36 cells (73.5%) have expected count less than 5. The minimum expected count is .02.

# **Appendix 6: Demographic Effects on the Importance of Career and Training Information**

**GRADE \* RESPONSE Crosstabulation** 

|        |       |                       |       |      |      | rosstar<br>RES | PONS |      |      |      |      |       |
|--------|-------|-----------------------|-------|------|------|----------------|------|------|------|------|------|-------|
|        |       |                       | 1     | 2    | 3    | 4              | 5    | 6    | 7    | 8    | 9    | Total |
|        |       | Count                 | 17    | 4    | 8    | 15             | 11   | 9    | 12   | 6    | 9    | 91    |
|        | e1    | <b>Expected Count</b> | 16.5  | 7.2  | 7.3  | 14.1           | 11.8 | 11.1 | 6.2  | 6.8  | 10   | 91    |
|        |       | Std. Residual         | 0.1   | -1.2 | 0.2  | 0.2            | -0.2 | -0.6 | 2.3  | -0.3 | -0.3 |       |
|        |       | Count                 | 35    | 16   | 24   | 36             | 29   | 23   | 21   | 7    | 24   | 215   |
|        | e2    | <b>Expected Count</b> | 39    | 17   | 17.4 | 33.2           | 27.8 | 26.2 | 15   | 16   | 23.7 | 215   |
|        |       | Std. Residual         | -0.6  | -0.2 | 1.6  | 0.5            | 0.2  | -0.6 | 1.7  | -2.2 | 0.1  |       |
|        | -     | Count                 | 100   | 35   | 49   | 91             | 69   | 75   | 37   | 46   | 57   | 559   |
|        | e3    | <b>Expected Count</b> | 101.5 | 44.2 | 45.1 | 86.4           | 72.3 | 68.1 | 38   | 42   | 61.7 | 559   |
|        |       | Std. Residual         | -0.1  | -1.4 | 0.6  | 0.5            | -0.4 | 0.8  | -0.2 | 0.7  | -0.6 |       |
|        | e4    | Count                 | 129   | 60   | 50   | 103            | 96   | 80   | 32   | 50   | 67   | 667   |
| GRADE  |       | <b>Expected Count</b> | 121.1 | 52.8 | 53.9 | 103.1          | 86.2 | 81.3 | 45   | 50   | 73.6 | 667   |
| GRADE  |       | Std. Residual         | 0.7   | 1    | -0.5 | 0              | 1.1  | -0.1 | -2   | 0.1  | -0.8 |       |
|        | Count | 33                    | 17    | 12   | 30   | 22             | 24   | 13   | 17   | 24   | 192  |       |
|        | e5    | <b>Expected Count</b> | 34.9  | 15.2 | 15.5 | 29.7           | 24.8 | 23.4 | 13   | 14   | 21.2 | 192   |
|        |       | Std. Residual         | -0.3  | 0.5  | -0.9 | 0.1            | -0.6 | 0.1  | 0    | 0.7  | 0.6  |       |
|        |       | Count                 | 28    | 16   | 10   | 18             | 18   | 19   | 12   | 13   | 27   | 161   |
|        | e6    | <b>Expected Count</b> | 29.2  | 12.7 | 13   | 24.9           | 20.8 | 19.6 | 11   | 12   | 17.8 | 161   |
|        |       | Std. Residual         | -0.2  | 0.9  | -0.8 | -1.4           | -0.6 | -0.1 | 0.3  | 0.3  | 2.2  |       |
|        |       | Count                 | 2     | 2    | 0    | 0              | 0    | 1    | 2    | 2    | 1    | 10    |
|        | e7    | <b>Expected Count</b> | 1.8   | 0.8  | 0.8  | 1.5            | 1.3  | 1.2  | 0.7  | 0.7  | 1.1  | 10    |
|        |       | Std. Residual         | 0.1   | 1.4  | -0.9 | -1.2           | -1.1 | -0.2 | 1.6  | 1.5  | -0.1 |       |
| Total  |       | Count                 | 344   | 150  | 153  | 293            | 245  | 231  | 129  | 141  | 209  | 1895  |
| 1 otai |       | <b>Expected Count</b> | 344   | 150  | 153  | 293            | 245  | 231  | 129  | 141  | 209  | 1895  |

**Chi-Square Tests** 

|                                 | Value     | df | Asymp.<br>Sig. (2-<br>sided) |
|---------------------------------|-----------|----|------------------------------|
| Pearson Chi-Square              | 52.275(a) | 48 | 0.311                        |
| Likelihood Ratio                | 53.802    | 48 | 0.262                        |
| Linear-by-Linear<br>Association | 0.751     | 1  | 0.386                        |
| N of Valid Cases                | 1895      |    |                              |

a 9 cells (14.3%) have expected count less than 5. The minimum expected count is .68.

AGE \* RESPONSE Crosstabulation

|       |                | RESPONSE Crosstabulation  RESPONSE |       |      |      |       |      |      |          |      |      | To            |  |  |
|-------|----------------|------------------------------------|-------|------|------|-------|------|------|----------|------|------|---------------|--|--|
|       |                |                                    | 1     |      |      |       |      |      |          |      |      |               |  |  |
|       |                | Count                              |       |      |      |       |      |      | <u> </u> |      |      | <b>tal</b> 27 |  |  |
|       |                | Count                              | 50    | 16   | 23   | 48    | 39   | 29   | 26       | 12   | 32   | 5             |  |  |
|       | 17-19          | <b>Expected Count</b>              | 50    | 21.7 | 22.3 | 43    | 36   | 33.5 | 19       | 20   | 29.9 | 27<br>5       |  |  |
|       |                | Std. Residual                      | 0     | -1.2 | 0.2  | 0.8   | 0.5  | -0.8 | 1.7      | -1.8 | 0.4  |               |  |  |
|       |                | Count                              |       | 86   | 87   | 179   | 135  | 136  | 73       | 73   | 110  | 10<br>74      |  |  |
|       | 20-24          | <b>Expected Count</b>              | 195.4 | 84.7 | 86.9 | 167.7 | 141  | 131  | 73       | 79   | 117  | 10 74         |  |  |
|       |                | Std. Residual                      | 0     | 0.1  | 0    | 0.9   | -0.5 | 0.5  | 0.1      | -0.6 | -0.6 | /-            |  |  |
|       |                | Count                              | 53    | 24   | 26   | 43    | 42   | 32   | 13       | 27   | 31   | 29<br>1       |  |  |
|       | 25-29          | Expected Count                     | 53    | 23   | 23.6 | 45.4  | 38.1 | 35.4 | 20       | 21   | 31.7 | 29<br>1       |  |  |
|       |                | Std. Residual                      | 0     | 0.2  | 0.5  | -0.4  | 0.6  | -0.6 | -1.5     | 1.2  | -0.1 |               |  |  |
| AGE   |                | Count                              | 27    | 13   | 12   | 19    | 21   | 19   | 10       | 16   | 18   | 15<br>5       |  |  |
|       | 30-34          | Expected Count                     | 28.2  | 12.2 | 12.5 | 24.2  | 20.3 | 18.9 | 11       | 11   | 16.9 | 15<br>5       |  |  |
|       |                | Std. Residual                      | -0.2  | 0.2  | -0.2 | -1.1  | 0.2  | 0    | -0.1     | 1.4  | 0.3  |               |  |  |
|       |                | Count                              | 20    | 10   | 6    | 11    | 12   | 14   | 6        | 10   | 16   | 10<br>5       |  |  |
|       | 35-39          | Expected Count                     | 19.1  | 8.3  | 8.5  | 16.4  | 13.7 | 12.8 | 7.1      | 7.7  | 11.4 | 10<br>5       |  |  |
|       |                | Std. Residual                      | 0.2   | 0.6  | -0.9 | -1.3  | -0.5 | 0.3  | -0.4     | 0.8  | 1.4  |               |  |  |
|       |                | Count                              | 6     | 3    | 2    | 2     | 5    | 4    | 2        | 2    | 4    | 30            |  |  |
|       | 40-44          | Expected Count                     | 5.5   | 2.4  | 2.4  | 4.7   | 3.9  | 3.6  | 2        | 2.2  | 3.3  | 30            |  |  |
|       |                | Std. Residual                      | 0.2   | 0.4  | -0.3 | -1.2  | 0.5  | 0.2  | 0        | -0.1 | 0.4  |               |  |  |
|       | 45.40          | Count                              | 2     | 1    | 1    | 1     | 0    | 2    | 1        | 2    | 0    | 10            |  |  |
|       | 45-49          | Expected Count                     | 1.8   | 0.8  | 0.8  | 1.6   | 1.3  | 1.2  | 0.7      | 0.7  | 1.1  | 10            |  |  |
|       |                | Std. Residual                      | 0.1   | 0.2  | 0.2  | -0.4  | -1.1 | 0.7  | 0.4      | 1.5  | -1   |               |  |  |
| Total |                | Count                              | 353   | 153  | 157  | 303   | 254  | 236  | 131      | 142  | 211  | 19<br>40      |  |  |
|       | Expected Count |                                    | 353   | 153  | 157  | 303   | 254  | 236  | 131      | 142  | 211  | 19<br>40      |  |  |

**Chi-Square Tests** 

|                    | 211 34411 |    |                           |
|--------------------|-----------|----|---------------------------|
|                    | Value     | df | Asymp. Sig. (2-<br>sided) |
| Pearson Chi-Square | 33.480(a) | 48 | 0.945                     |
| Likelihood Ratio   | 35.937    | 48 | 0.9                       |

N of Valid Cases

1940

a 17 cells (27.0%) have expected count less than 5. The minimum expected count is .68.

**DUTY \* RESPONSE Crosstabulation** 

| -     |               |                       |       | KESPU. |      |       | PONSI | Ē    |      |      |      |       |
|-------|---------------|-----------------------|-------|--------|------|-------|-------|------|------|------|------|-------|
|       | <u>,</u>      |                       | 1     | 2      | 3    | 4     | 5     | 6    | 7    | 8    | 9    | Total |
|       | 0-3           | Count                 | 241   | 95     | 115  | 212   | 172   | 160  | 91   | 89   | 140  | 1315  |
|       | years         | Expected Count        | 239.3 | 103.7  | 106  | 204.7 | 172   | 160  | 90   | 96   | 144  | 1315  |
|       | years         | Std. Residual         | 0.1   | -0.9   | 0.9  | 0.5   | 0     | 0    | 0.2  | -0.7 | -0.3 |       |
|       |               | Count                 | 56    | 27     | 21   | 56    | 46    | 38   | 22   | 27   | 31   | 324   |
|       | 4-6<br>years  | <b>Expected Count</b> | 59    | 25.6   | 26.1 | 50.4  | 42.4  | 39.4 | 22   | 24   | 35.4 | 324   |
| years | Std. Residual | -0.4                  | 0.3   | -1     | 0.8  | 0.5   | -0.2  | 0    | 0.7  | -0.7 |      |       |
|       | - 0           | Count                 | 14    | 8      | 8    | 11    | 12    | 7    | 3    | 3    | 9    | 75    |
|       | 7-9<br>years  | <b>Expected Count</b> | 13.6  | 5.9    | 6    | 11.7  | 9.8   | 9.1  | 5.1  | 5.5  | 8.2  | 75    |
|       | years         | Std. Residual         | 0.1   | 0.9    | 0.8  | -0.2  | 0.7   | -0.7 | -0.9 | -1.1 | 0.3  |       |
|       |               | Count                 | 14    | 7      | 2    | 10    | 8     | 10   | 3    | 9    | 8    | 71    |
|       | 10-12         | <b>Expected Count</b> | 12.9  | 5.6    | 5.7  | 11.1  | 9.3   | 8.6  | 4.8  | 5.2  | 7.8  | 71    |
| DUTY  | years         | Std. Residual         | 0.3   | 0.6    | -1.6 | -0.3  | -0.4  | 0.5  | -0.8 | 1.7  | 0.1  |       |
|       |               | Count                 | 14    | 9      | 5    | 6     | 8     | 10   | 8    | 9    | 11   | 80    |
|       | 13-15         | <b>Expected Count</b> | 14.6  | 6.3    | 6.4  | 12.5  | 10.5  | 9.7  | 5.4  | 5.9  | 8.7  | 80    |
|       | years         | Std. Residual         | -0.1  | 1.1    | -0.6 | -1.8  | -0.8  | 0.1  | 1.1  | 1.3  | 0.8  |       |
|       |               | Count                 | 12    | 6      | 5    | 6     | 6     | 10   | 5    | 4    | 11   | 65    |
|       | 16-18         | <b>Expected Count</b> | 11.8  | 5.1    | 5.2  | 10.1  | 8.5   | 7.9  | 4.4  | 4.8  | 7.1  | 65    |
|       | years         | Std. Residual         | 0.1   | 0.4    | -0.1 | -1.3  | -0.9  | 0.7  | 0.3  | -0.3 | 1.5  |       |
|       |               | Count                 | 2     | 1      | 0    | 1     | 2     | 1    | 0    | 1    | 2    | 10    |
|       | 19-21         | Expected Count        | 1.8   | 0.8    | 0.8  | 1.6   | 1.3   | 1.2  | 0.7  | 0.7  | 1.1  | 10    |
| :     | years         | Std. Residual         | 0.1   | 0.2    | -0.9 | -0.4  | 0.6   | -0.2 | -0.8 | 0.3  | 0.9  |       |
| Total |               | Count                 | 353   | 153    | 156  | 302   | 254   | 236  | 132  | 142  | 212  | 1940  |
| TULAI |               | Expected Count        | 353   | 153    | 156  | 302   | 254   | 236  | 132  | 142  | 212  | 1940  |

**Chi-Square Tests** 

|                                 | em square i |    |                           |
|---------------------------------|-------------|----|---------------------------|
|                                 | Value       | df | Asymp. Sig. (2-<br>sided) |
| Pearson Chi-Square              | 34.347(a)   | 48 | 0.931                     |
| Likelihood Ratio                | 36.672      | 48 | 0.883                     |
| Linear-by-Linear<br>Association | 1.849       | 1  | 0.174                     |
| N of Valid Cases                | 1940        |    |                           |

a 12 cells (19.0%) have expected count less than 5. The minimum expected count is .68.

SUP \* RESPONSE Crosstabulation

|       |                |                       | 301   | KESI O   | 115L C | TUSSTADI | mation |      |      |      |      |       |
|-------|----------------|-----------------------|-------|----------|--------|----------|--------|------|------|------|------|-------|
|       |                |                       |       | RESPONSE |        |          |        |      |      |      |      |       |
|       |                |                       | 1     | 2        | 3      | 4        | 5      | 6    | 7    | 8    | 9    | Total |
|       |                | Count                 | 236   | 95       | 105    | 212      | 171    | 165  | 93   | 89   | 129  | 1295  |
|       | No             | Expected Count        | 236.3 | 102.1    | 104    | 201.6    | 170    | 158  | 88   | 95   | 141  | 1295  |
| SUP   |                | Std. Residual         | 0     | -0.7     | 0.1    | 0.7      | 0.1    | 0.6  | 0.5  | -0.6 | -1   |       |
| SUF   |                | Count                 | 118   | 58       | 51     | 90       | 83     | 71   | 39   | 53   | 82   | 645   |
|       | Yes            | <b>Expected Count</b> | 117.7 | 50.9     | 51.9   | 100.4    | 84.4   | 78.5 | 44   | 47   | 70.2 | 645   |
|       |                | Std. Residual         | . 0   | 1        | -0.1   | -1       | -0.2   | -0.8 | -0.7 | 0.8  | 1.4  |       |
| Total |                | Count                 | 354   | 153      | 156    | 302      | 254    | 236  | 132  | 142  | 211  | 1940  |
| IUIAI | Expected Count |                       | 354   | 153      | 156    | 302      | 254    | 236  | 132  | 142  | 211  | 1940  |

**Chi-Square Tests** 

|                                 | _ cm square i |    |                           |
|---------------------------------|---------------|----|---------------------------|
|                                 | Value         | df | Asymp. Sig. (2-<br>sided) |
| Pearson Chi-Square              | 9.113(a)      | 8  | 0.333                     |
| Likelihood Ratio                | 9.052         | 8  | 0.338                     |
| Linear-by-Linear<br>Association | 0.471         | 1  | 0.492                     |
| N of Valid Cases                | 1940          |    |                           |

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 43.89.

## **Appendix 7: Demographic Effects on the Importance of Job-Related Information**

**GRADE** \* **RESPONSE** Crosstabulation

|       |    |                       |      |      |      | RESPO | NSE  |      |      |      | Total |
|-------|----|-----------------------|------|------|------|-------|------|------|------|------|-------|
|       |    |                       | 1    | 2    | 3    | 4     | 5    | 6    | 7    | 8    | Total |
|       |    | Count                 | 10   | 9    | 13   | 6     | 8    | 5    | 11   | 8    | 70    |
|       | e1 | <b>Expected Count</b> | 8.2  | 9.5  | 10.5 | 7.7   | 4.7  | 6.9  | 11.3 | 11.2 | 70    |
|       |    | Std. Residual         | 0.6  | -0.2 | 0.8  | -0.6  | 1.5  | -0.7 | -0.1 | -1   |       |
|       |    | Count                 | 23   | 22   | 25   | 21    | 11   | 20   | 27   | 24   | 173   |
|       | e2 | <b>Expected Count</b> | 20.2 | 23.5 | 26.1 | 19    | 12   | 17   | 28   | 27.6 | 173   |
|       |    | Std. Residual         | 0.6  | -0.3 | -0.2 | 0.5   | -0.2 | 0.7  | -0.2 | -0.7 |       |
|       |    | Count                 | 58   | 62   | 70   | 41    | 40   | 35   | 72   | 75   | 453   |
|       | e3 | <b>Expected Count</b> | 53   | 61.5 | 68.2 | 49.8  | 31   | 44.5 | 73.2 | 72.3 | 453   |
|       |    | Std. Residual         | 0.7  | 0.1  | 0.2  | -1.2  | 1.7  | -1.4 | -0.1 | 0.3  |       |
|       |    | Count                 | 59   | 79   | 79   | 66    | 30   | 55   | 89   | 94   | 551   |
| GRADE | e4 | <b>Expected Count</b> | 64.5 | 74.8 | 83   | 60.5  | 37   | 54.1 | 89   | 88   | 551   |
|       |    | Std. Residual         | -0.7 | 0.5  | -0.4 | 0.7   | -1.2 | 0.1  | 0    | 0.6  |       |
|       |    | Count                 | 19   | 19   | 28   | 23    | 8    | 25   | 27   | 26   | 175   |
|       | e5 | <b>Expected Count</b> | 20.5 | 23.8 | 26.4 | 19.2  | 12   | 17.2 | 28.3 | 27.9 | 175   |
|       |    | Std. Residual         | -0.3 | -1   | 0.3  | 0.9   | -1.1 | 1.9  | -0.2 | -0.4 |       |
|       |    | Count                 | 11   | 17   | 16   | 11    | 7    | 12   | 22   | 19   | 115   |
|       | e6 | <b>Expected Count</b> | 13.5 | 15.6 | 17.3 | 12.6  | 7.7  | 11.3 | 18.6 | 18.4 | 115   |
|       |    | Std. Residual         | -0.7 | 0.4  | -0.3 | -0.5  | -0.3 | 0.2  | 0.8  | 0.1  |       |
|       |    | Count                 | 1    | 2    | 2    | 2     | 0    | 0    | 2    | 1    | 10    |
|       | e7 | <b>Expected Count</b> | 1.2  | 1.4  | 1.5  | 1.1   | 0.7  | 1    | 1.6  | 1.6  | 10    |
|       |    | Std. Residual         | -0.2 | 0.6  | 0.4  | 0.9   | -0.8 | -1   | 0.3  | -0.5 |       |
| Total |    | Count                 | 181  | 210  | 233  | 170   | 104  | 152  | 250  | 247  | 1547  |
| Total |    | <b>Expected Count</b> | 181  | 210  | 233  | 170   | 104  | 152  | 250  | 247  | 1547  |

Chi-Square Tests

|              | Chroquar  | C 1 C 5 C 5 |                       |
|--------------|-----------|-------------|-----------------------|
|              | Value     | df          | Asymp. Sig. (2-sided) |
| Pearson Chi- |           |             |                       |
| Square       | 28.940(a) | 42          | 0.937                 |
| Likelihood   |           |             |                       |
| Ratio        | 29.923    | 42          | 0.919                 |
| Linear-by-   |           |             |                       |
| Linear       |           |             |                       |
| Association  | 1.717     | 1           | 0.19                  |
| N of Valid   |           |             |                       |
| Cases        | 1547      |             |                       |

a 9 cells (16.1%) have expected count less than 5. The minimum expected count is .67.

AGE \* RESPONSE Crosstabulation

|       |       |                       | RESPONSE |       |      |      |      |      |      | - T  |       |
|-------|-------|-----------------------|----------|-------|------|------|------|------|------|------|-------|
|       |       |                       | 1        | 2     | 3    | 4    | 5    | 6    | 7    | 8    | Total |
|       | 17-19 | Count                 | 30       | 27    | 33   | 21   | 22   | 19   | 31   | 32   | 215   |
|       |       | <b>Expected Count</b> | 25.5     | 29    | 32.5 | 23.6 | 15   | 21.3 | 34.4 | 34.1 | 215   |
|       |       | Std. Residual         | 0.9      | -0.4  | 0.1  | -0.5 | 1.9  | -0.5 | -0.6 | -0.4 |       |
|       |       | Count                 | 105      | 117   | 132  | 102  | 63   | 85   | 143  | 141  | 888   |
|       | 20-24 | <b>Expected Count</b> | 105.2    | 119.7 | 134  | 97.4 | 60   | 87.8 | 142  | 141  | 888   |
|       |       | Std. Residual         | 0        | -0.3  | -0.2 | 0.5  | 0.3  | -0.3 | 0.1  | 0    |       |
|       |       | Count                 | 26       | 35    | 41   | 20   | 14   | 26   | 37   | 40   | 239   |
|       | 25-29 | <b>Expected Count</b> | 28.3     | 32.2  | 36.1 | 26.2 | 16   | 23.6 | 38.3 | 38   | 239   |
|       |       | Std. Residual         | -0.4     | 0.5   | 0.8  | -1.2 | -0.6 | 0.5  | -0.2 | 0.3  |       |
|       | 30-34 | Count                 | 13       | 18    | 17   | 16   | 5    | 14   | 22   | 20   | 125   |
| AGE   |       | <b>Expected Count</b> | 14.8     | 16.9  | 18.9 | 13.7 | 8.5  | 12.4 | 20   | 19.8 | 125   |
|       |       | Std. Residual         | -0.5     | 0.3   | -0.4 | 0.6  | -1.2 | 0.5  | 0.4  | 0    |       |
|       | 35-39 | Count                 | 11       | 13    | 12   | 10   | 4    | 8    | 15   | 12   | 85    |
|       |       | <b>Expected Count</b> | 10.1     | 11.5  | 12.9 | 9.3  | 5.8  | 8.4  | 13.6 | 13.5 | 85    |
|       |       | Std. Residual         | 0.3      | 0.5   | -0.2 | 0.2  | -0.7 | -0.1 | 0.4  | -0.4 |       |
|       |       | Count                 | 2        | 2     | 3    | 4    | 0    | 5    | 4    | 5    | 25    |
|       | 40-44 | <b>Expected Count</b> | 3        | 3.4   | 3.8  | 2.7  | 1.7  | 2.5  | 4    | 4    | 25    |
|       |       | Std. Residual         | -0.6     | -0.7  | -0.4 | 0.8  | -1.3 | 1.6  | 0    | 0.5  |       |
|       | 45-49 | Count                 | 1        | 2     | 2    | 1    | 0    | 0    | 2    | 2    | 10    |
|       |       | <b>Expected Count</b> | 1.2      | 1.3   | 1.5  | 1.1  | 0.7  | 1    | 1.6  | 1.6  | 10    |
|       |       | Std. Residual         | -0.2     | 0.6   | 0.4  | -0.1 | -0.8 | -1   | 0.3  | 0.3  |       |
| Total |       | Count                 | 188      | 214   | 240  | 174  | 108  | 157  | 254  | 252  | 1587  |
| Tutai |       | <b>Expected Count</b> | 188      | 214   | 240  | 174  | 108  | 157  | 254  | 252  | 1587  |

Chi-Square Tests

|                      | Value     | df | Asymp. Sig. (2-sided) |  |  |
|----------------------|-----------|----|-----------------------|--|--|
| Pearson Chi-         |           |    |                       |  |  |
| Square               | 21.996(a) | 42 | 0.995                 |  |  |
| Likelihood Ratio     | 24.649    | 42 | 0.985                 |  |  |
| Linear-by-<br>Linear |           |    |                       |  |  |
| Association          | 0.454     | 1  | 0.5                   |  |  |
| N of Valid Cases     | 1587      |    |                       |  |  |

a 16 cells (28.6%) have expected count less than 5. The minimum expected count is .68.

**DUTY \* RESPONSE Crosstabulation** 

|       |                |                       | RESPONSE |       |      |       |      |      |      |      |       |
|-------|----------------|-----------------------|----------|-------|------|-------|------|------|------|------|-------|
|       | 1              |                       | 1        | 2     | 3    | 4     | 5    | 6    | 7    | 8    | Total |
|       | 0-3<br>years   | Count                 | 132      | 146   | 161  | 113   | 75   | 102  | 168  | 169  | 1066  |
|       |                | <b>Expected Count</b> | 125.6    | 143.7 | 161  | 116.9 | 73   | 106  | 171  | 169  | 1066  |
|       |                | Std. Residual         | 0.6      | 0.2   | 0    | -0.4  | 0.2  | -0.4 | -0.2 | 0    |       |
|       | 4-6            | Count                 | 32       | 33    | 44   | 31    | 24   | 26   | 42   | 44   | 276   |
|       | years          | <b>Expected Count</b> | 32.5     | 37.2  | 41.6 | 30.3  | 19   | 27.5 | 44.2 | 43.8 | 276   |
|       | 7              | Std. Residual         | -0.1     | -0.7  | 0.4  | 0.1   | 1.2  | -0.3 | -0.3 | 0    |       |
|       | 7-9            | Count                 | 6        | 11    | 9    | 7     | 2    | 8    | 11   | 11   | 65    |
|       | years          | <b>Expected Count</b> | 7.7      | 8.8   | 9.8  | 7.1   | 4.5  | 6.5  | 10.4 | 10.3 | 65    |
|       |                | Std. Residual         | -0.6     | 0.8   | -0.3 | 0     | -1.2 | 0.6  | 0.2  | 0.2  |       |
|       | 10-12<br>years | Count                 | 6        | 8     | 8    | 9     | 2    | 9    | 12   | 11   | 65    |
| DUTY  |                | Expected Count        | 7.7      | 8.8   | 9.8  | 7.1   | 4.5  | 6.5  | 10.4 | 10.3 | 65    |
|       |                | Std. Residual         | -0.6     | -0.3  | -0.6 | 0.7   | -1.2 | 1    | 0.5  | 0.2  |       |
|       | 13-15<br>years | Count                 | 6        | 7     | 10   | 9     | 1    | 6    | 9    | 7    | 55    |
|       |                | Expected Count        | 6.5      | 7.4   | 8.3  | 6     | 3.8  | 5.5  | 8.8  | 8.7  | 55    |
|       |                | Std. Residual         | -0.2     | -0.2  | 0.6  | 1.2   | -1.4 | 0.2  | 0.1  | -0.6 |       |
|       | 16-18          | Count                 | 4        | 7     | 5    | . 4   | 5    | 6    | 10   | 9    | 50    |
|       | years          | Expected Count        | 5.9      | 6.7   | 7.5  | 5.5   | 3.4  | 5    | 8    | 7.9  | 50    |
|       |                | Std. Residual         | -0.8     | 0.1   | -0.9 | -0.6  | 0.8  | 0.5  | 0.7  | 0.4  |       |
|       | 19-21<br>years | Count                 | 1        | - 2   | 2    | 1     | 0    | 1    | 2    | 1    | 10    |
|       |                | Expected Count        | 1.2      | 1.3   | 1.5  | 1.1   | 0.7  | 1    | 1.6  | 1.6  | 10    |
|       |                | Std. Residual         | -0.2     | 0.6   | 0.4  | -0.1  | -0.8 | 0    | 0.3  | -0.5 |       |
| Total |                | Count                 | 187      | 214   | 239  | 174   | 109  | 158  | 254  | 252  | 1587  |
|       |                | Expected Count        | 187      | 214   | 239  | 174   | 109  | 158  | 254  | 252  | 1587  |

**Chi-Square Tests** 

|                      | Value     | df | Asymp. Sig. (2-sided) |  |  |
|----------------------|-----------|----|-----------------------|--|--|
| Pearson Chi-         |           |    |                       |  |  |
| Square               | 18.857(a) | 42 | 0.999                 |  |  |
| Likelihood Ratio     | 20.749    | 42 | 0.998                 |  |  |
| Linear-by-<br>Linear |           |    |                       |  |  |
| Association          | 1.047     | 1  | 0.306                 |  |  |
| N of Valid Cases     | 1587      |    |                       |  |  |

a 13 cells (23.2%) have expected count less than 5. The minimum expected count is .69.

**SUP \* RESPONSE Crosstabulation** 

|        |     |                       | RESPONSE |                 |      |       |      |      |      | Total |      |
|--------|-----|-----------------------|----------|-----------------|------|-------|------|------|------|-------|------|
|        |     |                       | 1        | 1 2 3 4 5 6 7 8 |      |       |      |      |      |       |      |
|        |     | Count                 | 130      | 145             | 158  | 108   | 81   | 95   | 166  | 164   | 1047 |
|        | No  | <b>Expected Count</b> | 124      | 141.8           | 158  | 114.1 | 71   | 104  | 168  | 166   | 1047 |
| SUP    |     | Std. Residual         | 0.5      | 0.3             | 0    | -0.6  | 1.2  | -0.9 | -0.1 | -0.2  |      |
| SUI    | Yes | Count                 | 58       | 70              | 81   | 65    | 27   | 63   | 88   | 88    | 540  |
|        |     | <b>Expected Count</b> | 64       | 73.2            | 81.3 | 58.9  | 37   | 53.8 | 86.4 | 85.7  | 540  |
|        |     | Std. Residual         | -0.7     | -0.4            | 0    | 0.8   | -1.6 | 1.3  | 0.2  | 0.2   |      |
| Total  |     | Count                 | 188      | 215             | 239  | 173   | 108  | 158  | 254  | 252   | 1587 |
| 1 otai |     | <b>Expected Count</b> | 188      | 215             | 239  | 173   | 108  | 158  | 254  | 252   | 1587 |

Chi-Square Tests

|                      | em square |    |                       |  |  |
|----------------------|-----------|----|-----------------------|--|--|
|                      | Value     | df | Asymp. Sig. (2-sided) |  |  |
| Pearson Chi-         |           |    |                       |  |  |
| Square               | 8.481(a)  | 7  | 0.292                 |  |  |
| Likelihood Ratio     | 8.63      | 7  | 0.28                  |  |  |
| Linear-by-<br>Linear |           |    |                       |  |  |
| Association          | 1.061     | 1  | 0.303                 |  |  |
| N of Valid Cases     | 1587      |    |                       |  |  |

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 36.75.